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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/850,349 | 05/07/2001 | Ralph Antonius Cornelius Braspenning | PHNL 000276 | 2295 |

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EXAMINER

PATEL, SHEFALI D

ART UNIT PAPER NUMBER

2621

DATE MAILED: 04/21/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/850,349

Applicant(s)

BRASPENNING ET AL.

Examiner

Shefali D Patel

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 May 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 May 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Double Patenting

1. A rejection based on double patenting of the "same invention" type finds its support in the language of 35 U.S.C. 101 which states that "whoever invents or discovers any new and useful process ... may obtain a patent therefor ..." (Emphasis added). Thus, the term "same invention," in this context, means an invention drawn to identical subject matter. See *Miller v. Eagle Mfg. Co.*, 151 U.S. 186 (1894); *In re Ockert*, 245 F.2d 467, 114 USPQ 330 (CCPA 1957); and *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970).

A **statutory type** (35 U.S.C. 101) double patenting rejection can be overcome by canceling or amending the conflicting claims so they are no longer coextensive in scope. The filing of a terminal disclaimer cannot overcome a double patenting rejection based upon 35 U.S.C. 101.

2. **Claims 7 and 8** are provisionally rejected under 35 U.S.C. 101 as claiming the same invention as that of claims 9 and 10 of copending Application No. 09/850,347 and 09/850,348.

This is a provisional double patenting rejection since the conflicting claims have not in fact been patented.

3. The **nonstatutory double patenting rejection** is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

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4. **Claims 1 and 4** are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1 and 5 of copending Application No. 09/850,347 in view of Gu (US 6,075,875). Claims 1 and 4 (lines 1-9) recites the same method steps (claim 1) and elements in a system (claim 4) as claims 1 and 5 of the copending application, respectively. The copending application does not expressly disclose (in it's claims 1 and 5), "characterized in that the block is formed by pixels, a selection is made of pixels of the block from the first image which are visible in the area to be matched from the second image, and the calculation of a matching error is based on said selection" as recited in claims 1 and 4 (lines 10-12 in claim 1 and lines 10-13 in claim 4). However, Gu discloses block that is formed by pixels (See, col. 14 lines 16-17, 20-22), a selection is made of pixels of the block from the first image (function block 214 selects an initial pixel at col. 15 lines 10-14, See also col. 16 lines 19-25) which are visible in the area (See Figures 7A and 7B where two image frames 202a and 202b are shown where pixel 226 are shown by cross-hatching in Fig. 7B) to be matched from the second image (See, col. 14 lines 25-29; col. 15 lines 4-8), and the calculation of a matching error is based on said selection (See the error E being calculated by the summation equation, col. 15 lines 40-56). 09/850,347 and Gu are combinable because they are from the same field of endeavor, i.e., matching images by segmenting (in block) to estimate motion of the objects (see abstract of both). At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the teaching of Gu with 09/850,347. The motivation for doing so is to provide enhanced accuracy in representing moving image features. This enhanced accuracy is particularly beneficial because the motion of image features is a significant display characteristic for human observers as suggested by Gu (See the abstract, for

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example). Therefore, it would have been obvious to combine Gu with 09/850,347 to obtain the invention as specified in claims 1 and 4.

This is a provisional obviousness-type double patenting rejection.

Specification

5. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.
6. The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

Arrangement of the Specification

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

- (a) TITLE OF THE INVENTION.
- (b) CROSS-REFERENCE TO RELATED APPLICATIONS.
- (c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
- (d) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC (See 37 CFR 1.52(e)(5) and MPEP 608.05. Computer program listings (37 CFR 1.96(c)), "Sequence Listings" (37 CFR 1.821(c)), and tables having more than 50 pages of text are permitted to be submitted on compact discs.) or
REFERENCE TO A "MICROFICHE APPENDIX" (See MPEP § 608.05(a). "Microfiche Appendices" were accepted by the Office until March 1, 2001.)
- (e) BACKGROUND OF THE INVENTION.
 - (1) Field of the Invention.
 - (2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.
- (f) BRIEF SUMMARY OF THE INVENTION.

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- (g) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).
- (h) DETAILED DESCRIPTION OF THE INVENTION.
- (i) CLAIM OR CLAIMS (commencing on a separate sheet).
- (j) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).
- (k) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).

PLEASE NOTE: The specification does not have section titled BACKGROUND OF THE INVENTION, BRIEF SUMMARY OF THE INVENTION, BRIEF DESCRIPTION OF THE DRAWING, DETAILED DESCRIPTION OF THE INVENTION, etc.

Information Disclosure Statement

7. The information disclosure statement filed August 02, 2001 fails to comply with 37 CFR 1.98(a)(1), which requires a list of all patents, publications, or other information submitted for consideration by the Office. It has been placed in the application file, but the information referred to therein has not been considered. Please note: The international search report has been received and put it in the file however, reference GB 2 279 531 WO 99 22520 and WO 91 20155 have not been considered. If you would like them to be considered, please provide a copy.

Drawings

8. The drawings are objected to because the box elements in Figures 1 and 2 needs to be labeled in accordance with 37 C.F.R. § 1.83(a) as stated infra. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

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Specifically, 37 C.F.R. § 1.83(a) states that “the drawing in a nonprovisional application must show every feature of the invention specified in the claims. However, conventional features disclosed in the description and claims, where their detailed illustration is not essential for a proper understanding of the invention, should be illustrated in the drawing in the form of a graphical drawing symbol or a labeled representation (e.g., a labeled rectangular box).”

Claim Objections

9. Claim 1 is objected to because of the following informalities:
 - a. Claim 1 line 9 ought to have a comma (“,”) after “matching errors” as it does in claim 4.
 - b. In Claims 4 and 7, please delete the bullets.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

10. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

11. **Claims 3 and 6** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claims 3 and 6 line 2, phrase “based on depth” is vague and indefinite. It is claimed that the comparison is being done based on depth, however, it is not clear of what depth in reference to the image and/or an object.

Claim Rejections - 35 USC § 102

12. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

13. Claims 1-6 are rejected under 35 U.S.C. 102(e) as being anticipated by Gu (US 6,075,875).

With regard to **claim 1** Gu discloses a method of choosing an optimal candidate value to be used for matching a block from a first image (54a, Fig. 2A) with an area from a second image (54b, Fig. 2b), the method comprising: (a) making a set of candidate values for determining an area to be matched from the second image (the first image is segmented and represented by binary or multi-bit of the objects, col. 9 lines 17-37 and further the interior and exterior outlines defines a cluster representation of five-dimensional vector in the form of (r, g, b, x, y) at col. 13 lines 49-60. These are the set of values (pixel values and location) from which a user defines feature points of the object in the image frame at col. 9 lines 37-56 and col. 14 lines 10-12), (b) for each candidate value from the set, determining an area to be matched from the second image, based on said candidate value, matching the block from the first image with this area and calculating a matching error (matching images: See, col. 14 lines 25-29; col. 15 lines 4-8; calculating error E at col. 15 line 50), and (c) choosing the optimal candidate value from the set based on the calculated matching errors (determining motion vector and using that to determined the matching feature point in a successive image frame. Col. 14 lines 30-44),

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characterized in that the block is formed by pixels (See, col. 14 lines 16-17, 20-22), a selection is made of pixels of the block from the first image (function block 214 selects an initial pixel at col. 15 lines 10-14, See also col. 16 lines 19-25) which are visible in the area (See Figures 7A and 7B where two image frames 202a and 202b are shown where pixel 226 are shown by cross-hatching in Fig. 7B) to be matched from the second image (See, col. 14 lines 25-29; col. 15 lines 4-8), and the calculation of a matching error is based on said selection (See the error E being calculated by the summation equation, col. 15 lines 40-56).

Claim 4 recites identical features as claim 1 except claim 4 is a system claim. Thus, arguments similar to that presented above for claim 1 is equally applicable to claim 4. Note Gu discloses a system in Figure 1.

With regard to **claim 2** Gu discloses a method as claimed in claim 1, characterized in that the selection is made by determining for the pixels of the block from the first image what their location is in the area to be matched from the second image, and selecting a pixel based on a comparison with other pixels of the block from the first image which are found at the same position in the area to be matched from the second image (the location is known by the x and y coordinate of the block in the image frame and the selection is based on that. Also, selecting based on a comparison with other pixels of the block as seen at col. 15 line 66 to col. 16 lines 1-56).

With regard to **claim 3** it would have been obvious matter of design choice to modify Gu's reference by having the comparison being done based on the depth since applicant has not disclosed that having comparison being done based on the depth solves any stated problem or is

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for any particular purpose and it appears that the comparing by way of Gu's invention would perform equally well.

Claim 5 recites identical features as claim 2 except claim 5 is a system claim. Thus, arguments similar to that presented above for claim 2 is equally applicable to claim 5.

Claim 6 recites identical features as claim 3 except claim 6 is a system claim. Thus, arguments similar to that presented above for claim 3 is equally applicable to claim 6.

Conclusion

14. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. US 6,496,598 (see, col. 8 lines 32-48 and col. 17 line 22-42); US 6,668,082;


Yoshida et al, "Block Matching Motion estimation using Block Integration based on Reliability Metric," 1997, IEEE, pp. 152-155.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shefali D Patel whose telephone number is 703-306-4182. The examiner can normally be reached on M-F 8:00am - 5:00pm (First Friday off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Leo H Boudreau can be reached on 703-305-4706. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


DANIEL MARIAM
PRIMARY EXAMINER
April 7, 2004

Shefali D Patel
Examiner
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